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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,089	12/04/2001	Takahisa Hiraide	1075.1185	8026

21171 7590 06/14/2005

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EXAMINER

TRIMMINGS, JOHN P

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/000,089

Applicant(s)

HIRAIDE ET AL.

Examiner

John P. Trimmings

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2005 and 06 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,5,6,9-29 and 31 is/are allowed.
- 6) ☒ Claim(s) 2,4,30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This Office Action is in response to the applicants' amendment dated 5/4/2005, and RCE dated 5/6/2005.

The applicant amended Claims 1, 3, 6, 29 and 31.

The applicant in an earlier amendment canceled claims 6, 8, 32 and 33.

Claims 1-6 and 9-31 are pending.

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/4/2005 has been entered.

### ***Response to Amendment***

2. In view of the change to the Specification previously submitted on 1/6/2005, the examiner withdraws the objection to said Specification and approves the change.

### ***Response to Arguments***

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3. Applicant's arguments, see amendment filed 5/4/2005, with respect to Claims 1, 3, 5, 6, 9-29 and 31 have been fully considered and are persuasive. The rejections of said claims under 35 USC 103(a) has been withdrawn.

4. Applicant's arguments filed 5/4/2005, with respect to Claims 2, 4 and 30 have been fully considered but they are not persuasive. The applicant has argued that the MISR of Barnhart does not teach an output verifier, but the examiner disagrees. Firstly, the quote of the applicant mistakenly refers to page 751, column 2, paragraph 3 and argues that the examiner was using paragraph 3 to identify a verifier, but the examiner's reference was to page 751, column 2, paragraph 2 (see Final Office Action, page 9, 1<sup>st</sup> paragraph), wherein the MISR of the reference is also disclosed as having a mask. The examiner was simply showing that the MISR and the mask are joined as per the Figure 2 mask, and thus meet with the applicant's claim. Additionally, for example on page 751 column 1, last paragraph of Barnhart, the reference discloses that the MISR is used in outputting result data for verification (diagnostic purposes). Also, the use of a MISR as the output verifier is taught by the applicant's Disclosure wherein, "the output verifier is called a multiple input shift register (MISR), on page 4 lines 24-26, which, in view of this very disclosure, the claimed "output verifier" of the claims is indeed taught by the reference as being the MISR in Figure 2 of Barnhart. In view of the examiner's rebuttal herein, the Claims 2, 4 and 30 are maintained as being rejected under 35 USC 103(a).

***Allowable Subject Matter***

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5. Claims 1, 3, 5, 6, 9-29 and 31 are allowed. The reference art of Koenemann et al., Jas et al., Farnsworth et al., Rajski et al., and Barnhart et al. teach a circuit and method for testing an integrated circuit comprising a pseudo-random pattern generator, scan chains, ATPG unit, pattern modifier, output compression means, and test termination means. However, the prior arts of record taken alone, or in combination failed to teach, anticipate, suggest, or render obvious the claimed invention or the method steps of the application. Specifically, as per independent Claims 1, 3, 6, 29 and 31, the prior arts failed to teach, anticipate, suggest, or render obvious the limitation introduced into these claims, namely: the pattern modifier operates by interpolating the pseudo-random patterns with the ATPG patterns. Consequently, Claims 1, 3, 6, 29 and 31 are allowed over the prior arts of record. Claims 5 and 9-28 are directly or indirectly dependent upon Claims 1 and 3, and therefore are also allowable over the prior arts of record. Therefore Claims 1, 3, 5, 6, 9-29 and 31 are allowed.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Trimmings whose telephone number is (571) 272-3830. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John P Trimmings  
Examiner  
Art Unit 2133

jpt

  
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SUPERVISORY PATENT EXAMINER  
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